

S/191/62/000/011/C09/019  
B101/B186

Determination of the linear ...

vacuo and molded glass textolite differ in that the  $\Delta l/l_0$ -versus-temperature curve for the latter shows irregularities above 100°C, due to after-hardening of the resin and loss of volatile components (the loss in weight being greater than with vacuum-shaped textolite). Therefore, vacuum-shaped glass textolite offers higher heat resistance and mechanical strength. Glass textolite heated to 300°C and cooled in the desiccator showed constant relative elongation owing to the elimination of moisture. The bending strength of vacuum-shaped glass textolite after heating to 300°C rose by 15% to 2000 kg/cm<sup>2</sup>, at 350°C by 10% to 1900 kg/cm<sup>2</sup>. The bending strength decreased above 400°C. There are 6 figures and 3 tables.

Card 2/2

MARKOVICH, V.; CHERNENKO, L.Ye.

Effect of the dispersion medium and of surface-active substances on the plastic strength of structured suspensions of the type of the chocolate paste. *Kolloid. Zhr.* 15, 204-7 '53. (MIR 6:5)  
(CA 47 no.18:9520 '53)

1. Technol. Inst. Food Ind., Moscow.

*Markovich V.Ye.*

Effect of the dispersion medium and of surface-active substances on the plastic strength of structured suspensions of the type of the chocolate cake. V. E. Markovich and L. B. Chernenko. *Colloid J. U.S.S.R.* 15, 200-19 (1953) (Engl. translation). See C.A. 47: 9020c. H.L.H.

PETROV, N.A.; CHERNENKO, L.Ye.; MARKOVICH, V.B.

Effect of emulsifiers on structure formation in margarine emulsions.  
Izv.vys.ucheb.zav.;pishch.tekh. no.5:39-42 '58. (MIRA 11:12)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promysh-  
lennosti, kafedra neorganicheskoy khimii.  
(Oleomargarine) (Emulsifying agents)

CHERNENKO, L.Ye.; MARKOVICH, V.E.

Sedimentary compaction of the chocolate mass. Izv.vys.ucheb.  
zav.; pishch.tekh. no.5:142-145 '58. (MIRA 11:12)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti,  
kafedra neorganicheskoy khimii.  
(Chocolate)

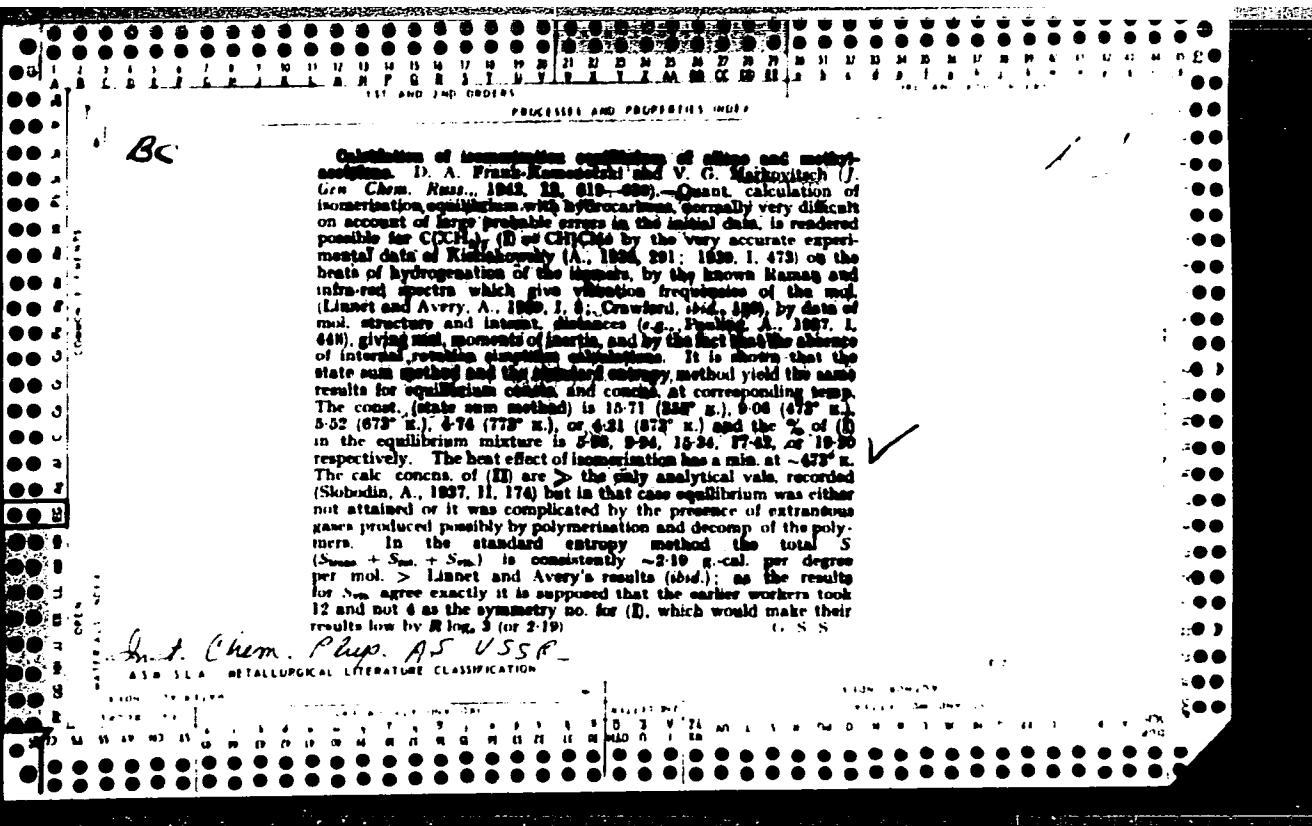
PETROV, N.A.; CHERENKO, L. Ye.; MARKOVICH, V.E.

Investigating the kinetics of dewatering of emulsions. Izv.vys.  
ucheb.zav.; pishch.tekh. no.1:99-103 '60. (MIRA 13:6)

1. Kafedra meorganicheskoy khimii Moskovskogo tekhnologicheskogo  
instituta pishchevyy promyshlennosti.  
(Emulsions)

BIL', V.S.; MARKOVICH, V.E.

Effect of the heating conditions of the sample on the value of the coefficient of linear expansion of plastics. Plast.massy no.10:  
50-52 '63. (MIRA 16:10)



*10.10.*

Inomerization equilibrium allene or methylenecyclopropane. D. A. Frank-Kamenetskii and V. G. Markovitch (Acta Physicochim. U.R.S.S., 1949, 17, 304-313).—The value of the equilibrium constant from spectroscopic and heat of hydrogenation data, are 16.6, 9.9, 8.5, 6.7, and 4.2 at 83°, 200°, 400°, 500°, and 600° respectively. With rise of temp. the proportion of  $C(CH_2)_2$  in the equilibrium mixture rises from 6.9% to 19.2%. Revised value for the entropy of  $C(CH_2)_2$ , at these temp. are 60.9, 65.87, 73.64, 76.78, and 79.91 g-cal per degree per mol. respectively. C. R. H.

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**High Temperature Oxidation Pyrolysis of Fuels as a Commercial Method for Production of Gaseous Olefins. I. Pyrolysis in the Presence of Air of the Residue from the Cracking of Naptha. II. Pyrolysis of Fuels in the Presence of Water Vapor and Oxygen.** (In Russian) D. M. Rudikovsky, V. G. Markovich, and B. A. Kozakova. *Journal of Applied Chemistry (U.S.S.R.)*, v. 19, nos. 10-11, 1946, p. 1149-1156; no. 12, 1946, p. 1381-1392.

1381-1392  
Gives results of experiments aimed at increasing the yields of unsaturated hydrocarbons from oxidation pyrolysis of petroleum cracking residues. Effects of various factors are tabulated and discussed. 20 ref.

ASD 364 METALLURGICAL LITERATURE CLASSIFICATION

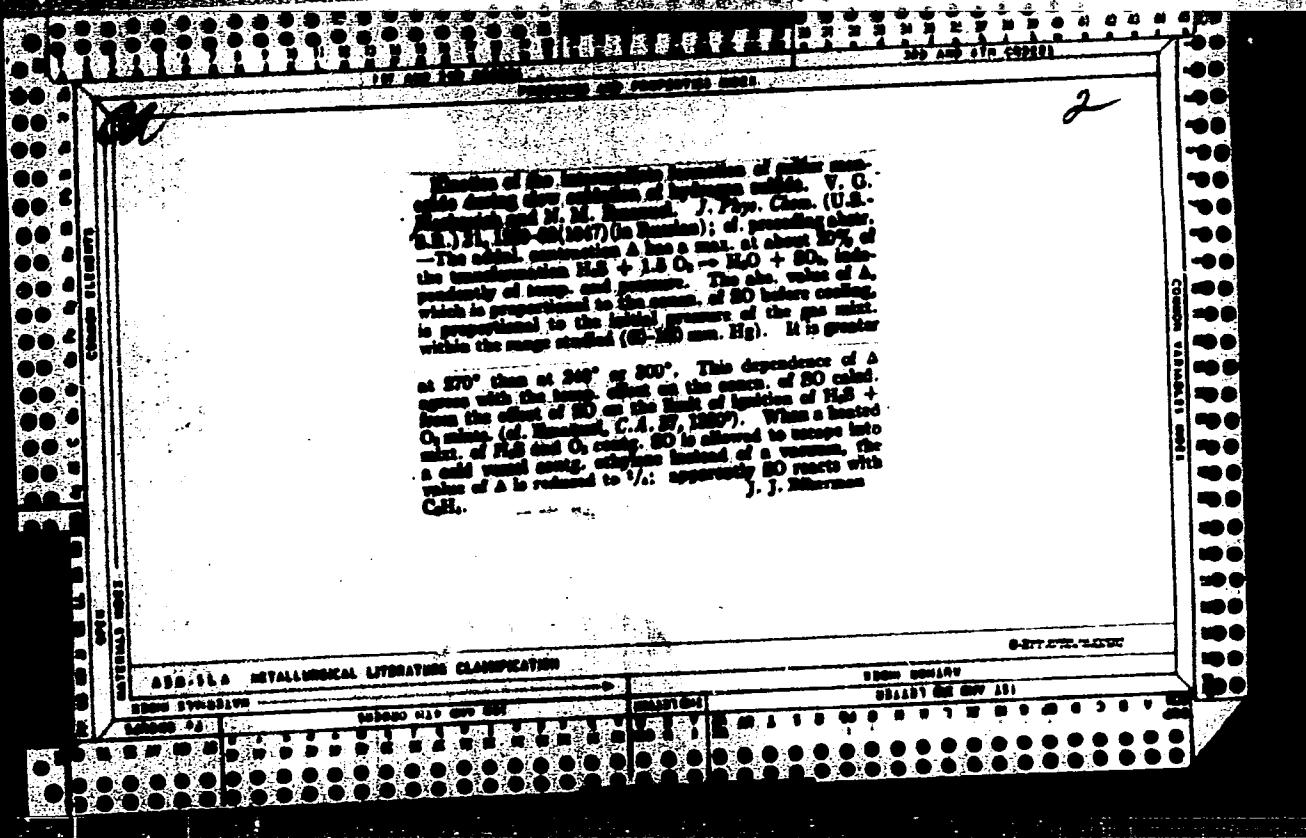
1324-824-179

APPROVED FOR RELEASE: 06/14/2000

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2

The growth of color compounds. V. G. Markovich  
and N. M. Shishman (Inst. Chem. Phys., Acad. Sci.  
U.S.S.R., Moscow). J. Russ. Chem. (U.S.S.R.) 21,  
No. 12 (1959), p. 2200. In the mol. wt. of  
manganese dioxide (I), a mixt. of MnO + 1.5 O<sub>2</sub>, was heated  
(100-400°) to 200 mmoles I and then allowed to come  
into a cold water or was cooled by immersing the reaction  
vessel (quartz) in cold water. In both instances, the gas  
volume decreased within about 1 min. to values smaller  
than due to the cooling of the gas. The initial  
contraction is attributed to the reaction  $2 \cdot SO \rightarrow S_2O_2$ . When the reaction between MnO and O<sub>2</sub> progresses to 100  
mmoles MnO and 150°, the initial contraction increases to a  
max. (about 6 mmles MnO) and disappears again. This  
change of the initial contraction is very similar to that of  
the excess of I added. In the absorption spectrum of  
mixt. of I + MnO + O<sub>2</sub> added to room temp. The spec.  
absorption of MnO is increased (less than 15 min.) because of  
deposition  $S_2O_2 \rightarrow SO_2 + S$ . J. J. Birkman

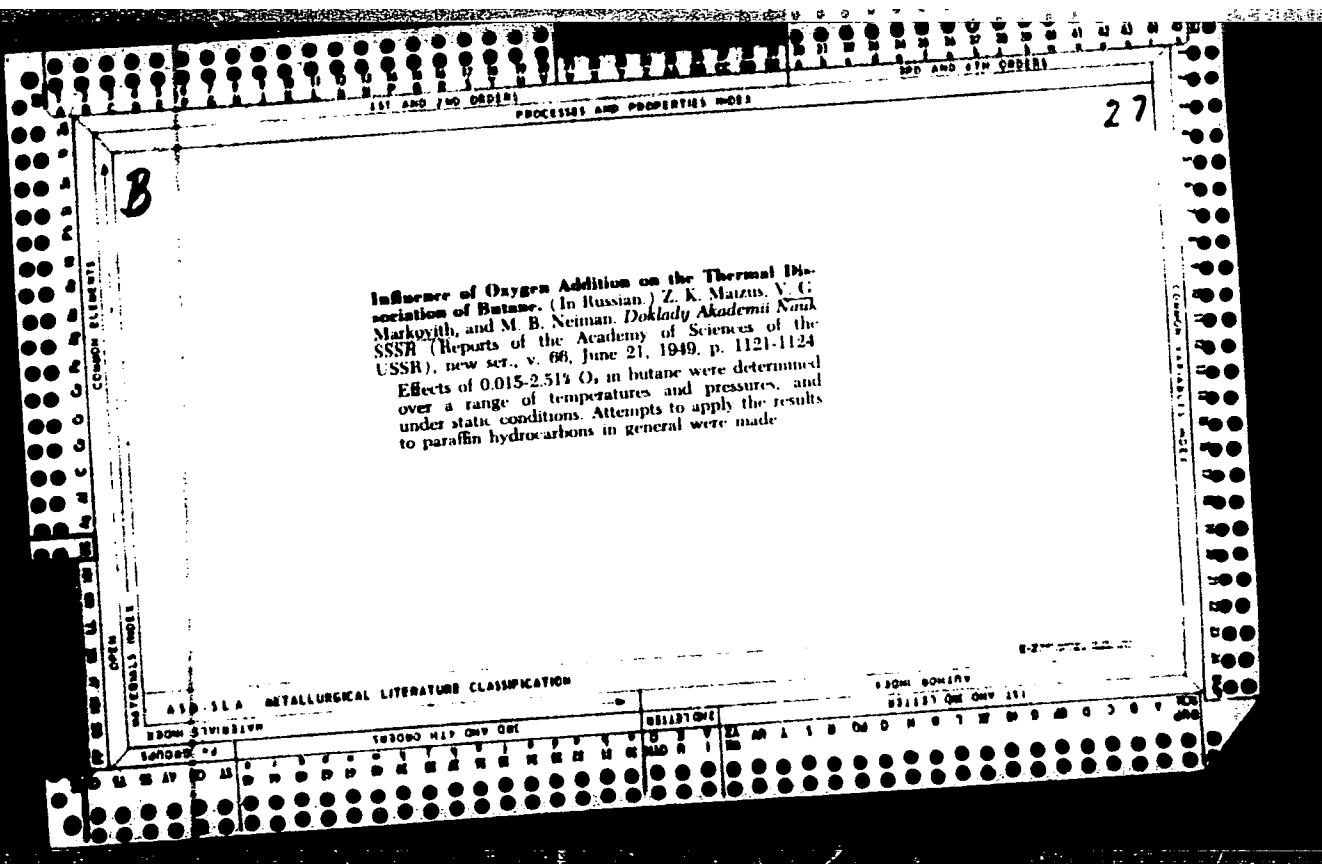


CA

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**Effect of diethyl peroxide on decomposition of butane.**  
V. K. Mal'kin, V. K. Markovich, and M. B. Neiman.  
*Zhur. Fiz. Khim.* 23, 1187 (1949). - When butane (I) at 100-200 mm. Hg was introduced into a quartz vessel heated to 332-461°, the pressure  $P$  suddenly (in a fraction of a sec.) increased by 4-10 mm.; this presumably was due to the presence of 0.015% O in I (cf. C.A. 43, 73007). Then  $P$  increased slowly at a const. rate  $r_1$ . The  $P$  of  $(\text{EtO}_2)_2$ , dilut. with 32 vols. N increased at once by an amt. twice that in the absence of N but less than in an explosion of  $(\text{EtO}_2)_2$ ;  $P$  increased slowly at the rate  $r_2$ . A mixt. of I with 3%  $(\text{EtO}_2)_2$  showed first a rapid and then a slow increase of  $P$  at the rate  $r_1 + r_2$ , thus proving that I and  $(\text{EtO}_2)_2$  decompr. independently of each other.  $(\text{EtO}_2)_2$  (1.3%) had no effect on the decompr. of I also during streaming through a "durabax" tube at atm. pressure and 500-530° when the amt. decompr. varied between 2 and 10%. This makes chain mechanism of the decompr. of I unlikely. J. J. Bikerman.

Inst. Chem. Phys., AS USSR



MARKOVICH, V. G.

U.S.S.R.

✓ Thermochemical investigations of solutions. V. Pressure and composition of vapors of binary systems of acetaldehyde and water. A. A. Dobrinakova, V. G. Markovich, and M. B. Nelman. *Zhur. Fiz. Khim. SSSR*, *37*, No. 1, 1963, p. 1053. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* (1963), 391-0; *cf. I. J. 44*, 523(a). The vapor pressures of pure and of 100% au-free solids of AcH were determined by the static method over the temp. range 0-25° for solns. concn. from 10 to 90% of AcH. The composition of the vapors were determined by a dynamic method. The vapor-pressure curve of AcH is given by  $\log P = 7.221 - (0000/0.3RT)$ . The vapor pressures of the solns. as shown in the figure and in tables, are very close to those calculated by the Duhem-Margules method, and obey the equation  $d \ln P/dT = L/RT^2$ . The exp'l. values of the heats of vaporization  $L$  for various concns. of solns. are, resp., 10%, 10.100; 20%, 19.50; 30%, 30.50; 50%, 40.00; 90%, 6270 cal./mol. Values for the heats of diln.  $O_1$  and  $O_2$  are also given.

MISHCHENKO, K.P.; PONOMAREVA, A.M.; RAVDEL', A.A.; BARON, N.M.;  
YEGOROV, I.M.; KVIAT, E.I.; VOLOVA, Ye.D.; MARKOVICH, V.G.;  
SEMELEV, G.I.; MARGOLIS, V.N., SMORODINA, T.P.; YAVORSKIY,  
I.V. Prinimal uchastiye FRANK-KAMENETSKIY, V.A.; TOMARCHENKO,  
S.L., red.; LEVIN, S.S., tekhn. red.

[Practical work in physical chemistry] Prakticheskie raboty po  
fizicheskoi khimii. Izd.2., perer. Leningrad, Gos. nauchno-  
tekhn. izd-vo khim. lit-ry, 1961. 374 p. (MIRA 15:2)  
(Chemistry, Physical and theoretical--Laboratory manuals)

MARKOVICH, V.I.

Protracted amental states and their treatment with neuroleptics.  
Vop.psikh.i nevr. no.7:468-471 '61. (MIRA 15:8)

1. Iz Psichiatricheskoy bol'nitsy imeni P.P.Kashchenko (glavnnyy  
vrach I.T.Viktorov, nauchnyy konsul'tant prof. Ye.S.Averbukh).  
(MENTAL ILLNESS) (AUTONOMIC DRUGS)

MIR'OVICH, Ya. L.

Markovich, Ya. L.--"Atypical forms of diseases of S. troponi-Vertebol", (two cases of cerebellumextra pyramidal dystonia with localization of foci on the cerebellum," Trudy (Zaraz. i zdr. med. i zdr.), Vol. II, 1945, p. 177-180.

CG: U-3264, 10 April 1959, (Leningrad Journal 'nykh. Stat., No. 3, 1945)

MARKOVICH, Ya. L.

BELYAYEVSKIY, V.P., inzh.; MARKOVICH, Ya. L., inzh.

Sakhalin paper industry in the postwar period. Bum. prom. 32 no.12:  
15-18 D '57. (MIRA 11:1)

1. Sakhalinsky sovet narodnogo khozyaystva (for Belyayevskiy).
2. Sakhalinbumtrest (for Markovich).  
(Sakhalin--Paper industry)

MARKOVICH, YE.A., RASUMOV, A.I., MULACHEVA, O.A. (Kazan Chem. Tech. Inst. im. S.M. Kirov)

"Biologically Active Alky'ated Amido-Esters and Compound Esters of Alkylphosphinic Acids" (Biologicheski aktivnyye alkilirovannyye amido-efiry i smeshannyye efiry alkilfosfinovykh kislot) (Work carried out 1948-1950)

Chemistry and Uses of Organophosphorus Compounds.  
(Khimiya i primeneniye sovremennoi organicheskoy khimii),  
Trudy of First Conference, 1-11 December 1950, Kazan,  
pp. Published by Kazan Acad. AS USSR. 1957  
194-204,

*MARKO vich**HE 47 - 1*

✓ Biologically active alkylated amide esters and mixed  
esters of alkylphosphonic acids (A. I. Razumov, P. A.  
Markovich, and O. A. Mukhacheva (S. M. Kirov Chem.  
Technol. Inst., Kuzan). Khim. i Primenenie Posfororgan.  
Socidinenii, Akad. Nauk S.S.R., Izd. 1-oi Konferents.,  
1955, 194-204 (Publ. 1957).—The following substances were  
prepd. during 1945-50 in a search for biologically ac-  
tive compds. of P which would not have the defects of fluo-  
rophosphates. Addn. of  $\text{PCl}_5$  to  $\text{RPO}(\text{OR})_2$  gives 10-30%  
 $\text{RPOCl}_4$  and up to 40%  $\text{RPOCl}(\text{OR})$ , but the products have  
close b.ps. and sepn. is difficult.  $\text{SOCl}_2$  also give unsatis-  
factory results. Reaction of  $\text{RPOCl}_4$  with  $\text{P}_3\text{NH.HCl}$  is not  
very good, <sup>1</sup> requires 3 moles  $\text{RPOCl}_4$  and gives no more  
than 30-40% desired  $\text{RP(O)(NR}_2)_2\text{Cl}$ . Reaction of 2 moles  
 $\text{R}_2\text{NH}$  with 1 mole  $\text{RPOCl}_4$ , however did yield:  $\text{MeP(O)N-}$   
 $\text{NE}_2\text{Cl}$ , b. 115-5.5°,  $d_4^{20}$  1.1275,  $n_D^{20}$  1.4648;  $\text{EtP(O)-}$   
 $\text{NE}_2\text{Cl}$ , b. 101.5°, 1.1140, 1.0936, 1.4648;  $\text{PrP(O)NE}_2\text{Cl}$

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RAZUMOV A.I., MARIVICH E.A., MULIAKOV D.R.

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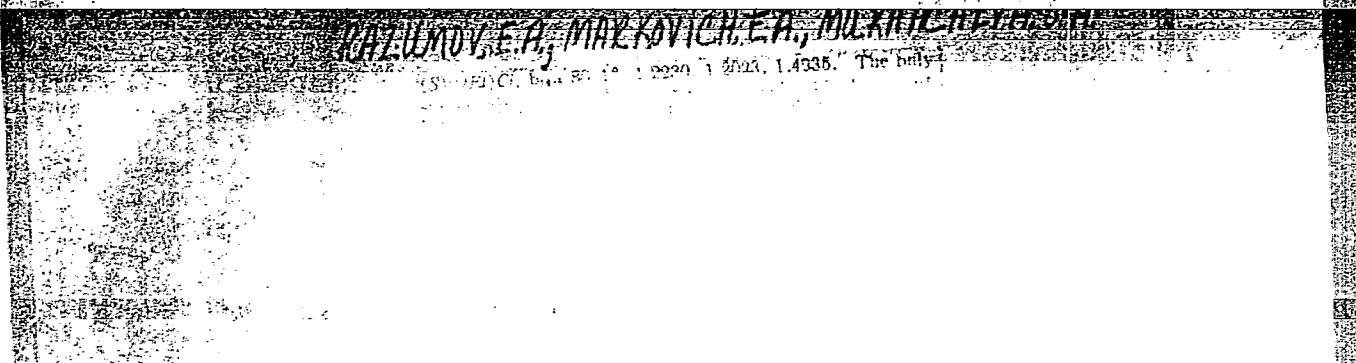
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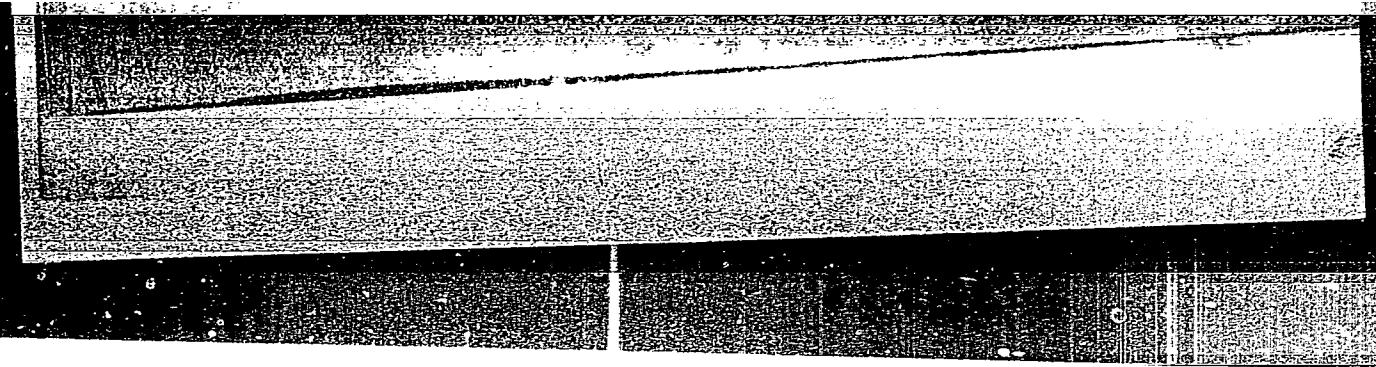


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RIZZUMOV, A. I., MARKOVICH, E. A., MUKHACHEVA, O. A.

1.4305;  $EOP(O)(OB)_2CH_2CH_2$ , b.p. 80-92°, 1.0930, 1.0752;  
 1.4488;  $EOP(O)(OE)_2NHCH_2CH_2Cl$ , b.p. 144-5°, 1.1093;  
 1.1515, 1.4565;  $EOP(O)(OB)_2NHCHMe(CH_2)_3NHEt_2$ , b.p. 153-4°, 0.9733, 0.9594, 1.4530;  $EOP(O)(SE)_2NEt_2$ , b.p. 8°, 1.0458, 1.0207, 1.4892;  $EOP(O)(NEt_2)_2OC_6H_5NO_2-p$ ,  
 b.p. 172.5°, 1.2019, 1.1861, 1.6309;  $MeP(O)(OMe)NEt_2$ ,  
 b.p. 71-4°, 1.0387, 1.0264, 1.4358;  $MeP(O)(OB)_2NEt_2$ , b.p.  
 77-8°, 1.0127, 0.9944, 1.4350;  $MeP(O)(OCHMe_2)NEt_2$ , b.p.  
 80-1°, 1.0901, 1.0763, 1.4395; iso- $P(OP(O)(OB))NEt_2$ , b.p.  
 74.5-5°, 0.9866, 0.9709, 1.4360. All these were biologically  
 active inhibitors of cholinesterase and miotics. Insecticidal  
 and other biological properties were not examined. Miotic  
 action lasting up to 50 days was produced by them in cats. Sta-  
 bility of eq. solns. ranged from 10 to 50 days. The most ac-  
 tive miotics were:  $EOP(O)(OCHMe_2)NEt_2$  (0.15% aq.  
 soln.; 50% cholinesterase inhibition by  $6 \times 10^{-6} M$  concn.)  
 and  $EOP(O)(OB)_2NHEt_2$  (0.1%;  $1 \times 10^{-4} M$ ). The ester  
 chlorides also gave the mixed esters:  $EOP(O)(OMe)_2OC_6H_5-$   
 $NO_2-p$ , b.p. 159-60°, 1.3018, 1.5294;  $EOP(O)(OB)_2OC_6-$   
 $H_5NO_2-p$ , b.p. 163.5°, 1.2716, 1.2545, 1.6242;  $EOP(O)(O-$   
 $Et)_2OC_6H_5NO_2-p$ , b.p. 140-2°, 1.2666, 1.2487, 1.5115;  $EOP-$   
 $(O)(OB)_2OC_6H_5NHEt_2$ , b.p. 145-6°, 1.0965, 1.2482, 1.5110;  
 $EOP(O)(NEt_2)_2OC_6H_5NO_2-p$ , b.p. 158-8.5°, 1.2407, 1.2231,  
 1.3210;  $EOP(O)(OCHMe_2)OC_6H_5NO_2-p$ , b.p. 161-4°,  
 1.2286, 1.5233;  $EOP(O)(OB)_2OC_6H_5NO_2-p$ , b.p. 181.5-  
 2.5°, 1.2187, 1.1908, 1.5180;  $EOP(O)(OCH_2CHMe_2)OC_6H_5-$   
 $NO_2-p$ , b.p. 163.5-4°, 1.2139, 1.1971, 1.5174;  $EOP(O)(OE)-$   
 $OC_6H_5Cl-p$ , b.p. 117-18°, 1.2298, 1.2122, 1.5050;  $EOP(O)-$   
 $(OB)_2OC_6H_5Cl-p$ , b.p. 156.7°, 1.2250, 1.3995, 1.5045;  $EOP-$   
 $(O)(OB)_2OC_6H_5NHEt_2$ , b.p. 153.5-3.5°, 1.1254, 1.4249;  $EOP(O)-$   
 $(OB)_2OC_6H_5NHEt_2$ , b.p. 153°. These were more interesting  
 and useful compds. than the ester amides, being stable and

RAZUMOV, A.I., MARKOVICH, F.A., MURKACHEV, V.A.

highly active. Especially powerful antitumor action at 5 mg was found in  $\text{BPO}(\text{OBz})\text{OCH}_2\text{NO}_2$ , which was named Armin; the substance shows biological activity up to 100 times higher than that of the standard drug. After 10 years, its value was clearly established in practice; it is used in the treatment of malignant tumors, effective in gliomas and other neoplasms but, it shows no side reactions in the patient; it is being tested in leucosarcoma and infantile paralysis therapy. The other esters in the above group are similar to armin, but not as potent. Also there were prep.  $(\text{RO}_2\text{P})(\text{OEt})_2$  and  $(\text{RO})_2\text{P}(\text{NH})\text{R}$ , which attempts to effect the Arbuzov reaction with these gave very low yields of phosphonates, the reactions with RX yielding mainly the quaternary salts. The substances added S. Some of the PII ester amides produced myosis, while the S adducts were insecticidal. G.M. Kosolapoff

5/5

pmj

*MARKOVICH, V.E.A.*

Distr: *H*

*p*-Ethyl-*p*-nitrophenyl ester of ethyliophosphinic acid (Amine), its homologs and analogs. A. I. Razumov, V. Markovich, and O. A. Mulyacheyva. U.S.S.R. 103704, June 15, 1966. The title compounds are obtained by deionization of phosphites in the presence of a small quantity of already brominated phosphite followed by chlorination of the resulting product with  $\text{PCl}_5$ . The last step is carried out in a greatly dil. soln. in an inert solvent, such as  $\text{CCl}_4$ . Finally, the halide is exchanged for a *p*-nitrophenyl or other similar group.

*M. Hoach*

*M. A. Markovich, Y.A.*  
 Distr: 4E4 / 4E2c(j) /  
 4E3d

Derivatives of alkylphosphonous and phosphonic acids.  
 VI. Halides and alkylamino amides of alkylalkoxyphosphonic acids. A. I. Razumov, G. A. Munchikova and  
 B. A. Markovich (Chem. Technol. Inst., Krasnoyarsk). Zhur.  
 Obrabotka Krm. 27, 2003-91 (1987) c. U.S. 4,183,222;  
 U.S.S.R. 102,481. To 189 g. EtP(O)(OEt), in 2 l. CCl<sub>4</sub>  
 was added with stirring in small portions 175 g. PCl<sub>5</sub> over  
 14 hrs. at 28-30°; after stirring 1 hr. the mixt. was dried,  
 in vacuo yielding the following: 20% EtP(O)(OEt)Cl, b.p. 73-4°,  
*n*<sub>D</sub> 1.1831, *m*<sub>W</sub> 1.4338; 80% EtP(O)(OPr-iso)Cl, b.p. 76.6-  
 85.7°, *n*<sub>D</sub> 1.1803, 1.4400; 45% EtP(O)(Pr-iso)Cl, b.p. 76.6-  
 85.7°, 1.1803; 1.4400; 45% EtP(O)(OPr-iso)Cl, b.p. 100-2°,  
*n*<sub>D</sub> 1.1833; 1.4296; 70% EtP(O)(OBu)Cl, b.p. 89.9-5°,  
 1.0993; 1.4305; 70% EtP(O)(OBu-iso)Cl, b.p. 88-7°, 1.2924;  
 1.0898; 1.4355; 80% MeP(O)(OPr-iso)Cl, b.p. 88-7°, 1.2940;  
 1.4340. In the prepn. of the iso-Pr ester of EtPO<sub>2</sub>H, a diffi-  
 culty was encountered in both usual methods of synthesis;  
 the Arbuzov reaction gave a consumption of iso-PrP(O)-  
 (OPr-iso) from iso-PrI reaction, while the Michaelis reaction  
 gave only the salts, rather than the desired ester.  
 The necessary EtP(O)(OPr-iso), b.p. 83-90°, 0.9704, 1.4120,  
 was finally prep'd. by oxidation of the EtP(OPr-iso) by an  
 unstated method. The chloroesters above are readily hy-  
 drolyzed by atm. moisture; with H<sub>2</sub>O in the presence of a base  
 they yield the corresponding pyrophosphonates; on heating  
 they decompr. to RCl and RPO<sub>3</sub>. The ester chlorides (1  
 mole) treated with 2 moles of an amine in Et<sub>2</sub>O at -15°  
 gave after filtration and distil. the following amide esters,  
 most of which are sol. in H<sub>2</sub>O: 58% EtP(O)(OAc)NEt<sub>2</sub>,  
*b*<sub>1</sub> 87-7.5°, 1.0043, 1.4381; 56% EtP(O)(OBz)NEt<sub>2</sub>, *b*<sub>1</sub>  
 94-8.5°, 0.9886, 1.3355; 33% EtP(O)(OPr-iiso)NEt<sub>2</sub>, *b*<sub>1</sub> 98-9°,  
 0.9783, 1.4368; 40% EtP(O)(OPr-iso)NEt<sub>2</sub>, *b*<sub>1</sub> 87-8.5°,  
 0.9850, 1.4381; 78% EtP(O)(OBu)NEt<sub>2</sub>, *b*<sub>1</sub> 88.5-9.5°,  
 0.9521, 1.4300; 35% EtP(O)(OBu-iso)NEt<sub>2</sub>, *b*<sub>1</sub> 88.5-7°,  
 0.9503; 1.4357; 12% EtP(O)(OC<sub>2</sub>H<sub>5</sub>)NEt<sub>2</sub>, *b*<sub>1</sub> 116.5-8°.

*A. I. RAZUMOV, O. A. MULK HACHUVVA*

0.0428, 1.4417; 16%  $\text{EtP(O)(OCH}_2\text{)NE}_2$ , b.p. 118-20.0°,  
 1.0060, 1.4630; 25%  $\text{EtP(O)(OCH}_2\text{Ph)NPE}_2$ , b.p. 162-3°,  
 1.0554, 1.4976; 27%  $\text{EtP(O)(OE)NH}_2$ , b.p. 111.5-12°,  
 1.0232, 1.4380; 73%  $\text{EtP(O)(OBu-4)}\text{NHE}_2$ , b.p. 129-9.5°,  
 0.9749, 1.4358; 78%  $\text{EtP(O)(OE)NM}_2$ , b.p. 63-4°, 1.0100,  
 1.4308; 60%  $\text{EtP(O)(OE)N(CH}_2)_2$ , b.p. 89-52°, 1.0752,  
 1.4488 (c 2:1 molar mixt. of reactants); 52%  $\text{EtP(O)(OE)-}$   
 $\text{NHCH}_2\text{CH}_2\text{Cl}$ , b.p. 144-5°, 1.1515, 1.4606 (an equimolar  
 mixt.); 61%  $\text{EtP(O)(OE)NHCH}_2\text{Me(OCH}_2\text{)NE}_2$ , b.p.  
 153-4°, 0.9594, 1.4630; 55%  $\text{EtP(O)(OCH}_2\text{NO-4)}\text{NE}_2$ ,  
 b.p. 172.5°, 1.1861, 1.5309; 52%  $\text{EtP(O)(SB)NE}_2$ , b.p.  
 108-8°, 1.0297, 1.4602. Also were prep'd.: 50%  $\text{MeP(O)-}$   
 $(OMe)NE_2$ , b.p. 71-4°, 1.0214, 1.4356; 60%  $\text{MeP(O)(OE)-}$   
 $NE_2$ , b.p. 77-9°, 0.9944, 1.4380; 41%  $\text{MeP(O)(OPr-}$   
 $(so)NE}_2$ , b.p. 80-1.5°, 1.0763, 1.4395; 57% *iso-PrP(O)-*  
 $(OE)NE_2$ , b.p. 74.5-5°, 0.9709, 1.4360. The amides are  
 readily hydrolyzed, especially in acid solns., and treatment  
 with dil. HCl yields the appropriate pyrophosphonate.  
 The ester amides are biologically active and *inhibit cholin-*  
*esterase* to the extent of 80% at concn. of  $1.6 \times 10^{-4}$ . With  
 this property, however, their toxicity is low, and LD<sub>50</sub> in  
 intravenously for mice ranges from 2.6 to 1308 mg./kg. Most  
 of the ester amides produce myosis which may last up to 50  
 days in cats and humans. Most of the amides are sol. in  
 H<sub>2</sub>O and their solns. are stable for not over 25 days. To 47  
 g.  $\text{EtP(O)(OE)Cl}$  in C<sub>6</sub>H<sub>6</sub> and 28.2 g. NaHCO<sub>3</sub> (or an  
 equiv. amt. pyridine) was added 0.6 ml. H<sub>2</sub>O (exothermic  
 reaction) yielding after filtration 18%  $\text{EtP(O)(OE)}_2\text{O}$ , b.p.  
 135.5-41°, d<sub>4</sub> 1.4333, n<sub>D</sub> 1.4280. The same formed in 50%  
 yield on addn. to 100 ml. Et<sub>2</sub>O, 0.5 g. H<sub>2</sub>O, and 1.3 M HCl  
 of 20 ml.  $\text{Et}_2\text{Oco}(\text{OEt})_2$ , 8 g.  $\text{EtP(O)(OBu-4)NHE}_2$ , VII. Mixed  
 esters of primary phosphonic acids: A. I. Razumov, B. A.  
 Markovich, and A. D. Rechinskaya. *Izv. Akad. Nauk SSSR*,  
 No. 1, 230-4 (1964). Into a soln. of 13.4 g.  $\text{EtP(O)(OE)}_2\text{O}$ , b.p. 77.5°, d<sub>4</sub> 1.0779,  
 n<sub>D</sub> 1.4262, Cl was passed at -15° until a yellowish color

*A.I. Razumov, O.A. M.M. Kuznetsov*

appeared; after blowing with N<sub>2</sub> 30% EIP(O)(OBu)<sub>2</sub>Cl was obtained. This (204.5 g.) added to 181 g. *p*-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>OH and 1.5 l. dry Et<sub>2</sub>O and stirred 45 min., then slowly treated with 182 g. Et<sub>3</sub>N in Et<sub>2</sub>O, and refluxed 40 min., gave after filtration and distn. (not over 0.2 mm. pressure to avoid decompr.) 61% EIP(O)(OBu)<sub>2</sub>OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*p*, b.p. 163-5°, 1.2545, 1.5242. Similarly were prep'd.: 44% EIP(O)(OMe)OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*p*, b.p. 169-0°, 1.3018, 1.3294; 44% EIP(O)(OE)OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*p*, b.p. 140-2°, 1.2487, 1.5118; 60% EIP(O)(OE)OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*o*, b.p. 145-8°, 1.2482, 1.5110; 60% EIP(O)(OPr)OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*p*, b.p. 168-8.6°, 1.2291, 1.5210; 15% EIP(O)(OPr)OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*p*, b.p. 161-4°, 1.2280, 1.5233; 57% EIP(O)(OBu)OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*p*, b.p. 181.5-2.5°, 1.1988, 1.5180; 22% EIP(O)(OBu-*is*)OC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-*p*, b.p. 183.5-4°, 1.1871, 1.5174; 60% EIP(O)(OE)OC<sub>6</sub>H<sub>4</sub>Cl-*p*, b.p. 117-18°, 1.2122, 1.5050; 22% EIP(O)(OE)OC<sub>6</sub>H<sub>4</sub>Cl-*o*, b.p. 106-7°, 1.2068, 1.5045. The esters are slightly sol. in H<sub>2</sub>O and are stable in aq. soln. for several years, but are hydrolyzed in alk. solns. All are strong myotics and inhibitors of cholinesterase. The Et<sub>2</sub>-nitropentenyl ester is most active giving myosis at 1:200,000 diln. and having *acetylcholinesterase activity* at  $2 \times 10^{-7}$  diln. This substance, named Arain, is listed clinically for glaucoma treatment.

G. M. Kosolapoff

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2 May  
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MARKOVICH, YE.A

RAZUMOV, A.I.; MARKOVICH, Ye.A.; RESHETNIKOVA, A.D.

Alkylphosphinous and phosphinic acid derivatives. Part 7:  
Mixed esters of primary phosphinic acids. Zhur. ob. khim.  
27 no.9:2394-2396 S '57. (MIRA 11:3)

1. Kazanskiy khimiko-tehnologicheskiy institut.  
(Phosphinic acid)

- MARKOVICH, YE. A.

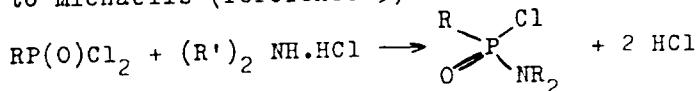
70-1-41/63

AUTHORS: Razumov, A. I. , Mukhacheva, O. A. , Markovich, Ye. A.

TITLE: Investigations in the Series of Alkylphosphinic and Phosphinic Acids (Issledovaniya v ryadu alkilfosfinistykh i fosfinovykh kislot) VIII. Synthesis and Properties of Some Alkylated Amides of Alkylchlorophosphinic Acids (VIII. Sintez i svoystva nekotorykh alkilirovannykh amidov alkilkhlorofosfinovykh kislot)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, p .194-197(USSR)

ABSTRACT: In order to come to the alkylated amides of alkylchlorophosphinic acids, two methods were investigated. The first one consisted of the ammonium conversion of the full acid-chlorine-anhydrides with the hydrochlorides of amines according to Michaelis (reference 3):

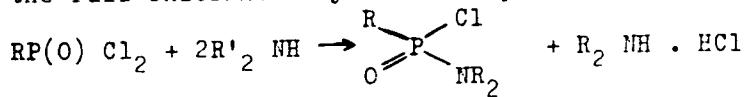


Card 1/3 This method gives a yield of 30 - 35 % and requires at least

75-1-1/63

Investigations in the series of Alkylphosphinic and Phosphinic Acids. VIII.  
Synthesis and Properties of Some Alkylated Amides of Alkylchlorophosphinic  
Acids

the triple amount of the theoretical yield of chloroanhydride which is for the most part lost. For this reason the authors preferred the method of the partial ammonium conversion of the full chlorine anhydrides of primary phosphinic acids



In this manner they synthesized some representatives of this series of compounds (table 1), whereas the ammonium conversion with primary amines in a vacuum yielded nondistillable and impure products. The alkylated amides of alkylfluorophosphinic acids are liquids with a high slight aromatic smell. They are fairly stable with regard to hydrolysis and are of a high toxic nature. Thus the authors synthesized some representatives of alkylphosphinic acids with mixed functions: alkylated amides of chloro- and fluorophosphinic acids as well as full fluorine anhydrides of alkylphosphinic acids. The authors determined an easy hydrolyzability of the alkylated amides of chlo-

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70-1-41/63  
Investigations in the Series of Alkylphosphinic and Phosphinic Acids. VIII.  
Synthesis and Properties of Some Alkylated Amides of Alkylchlorophosphinic  
Acids

lorphosphinic acids and an instability of the P-N bond in those of fluorophosphinic acids. The easy hydrolyzability of the former already at mere humidity easily leads to alkylated amides of alkylpyrophosphinic acids. Thanks to the instability of the P-N bond in the amides of fluorophosphinic acids on heating full fluorine anhydrides of these acids can be obtained. There are 3 tables, and 13 references, 5 of which are Slavic.

ASSOCIATION: Kazan' Chemical-Technological Institute  
(Kazanskiy khimio-tehnologicheskiy institut)

SUBMITTED: November 22, 1956

AVAILABLE: Library of Congress

Card 3/3      1. Chemistry    2. Phosphinic acid-Properties    3. Phosphinic acid-Synthesis

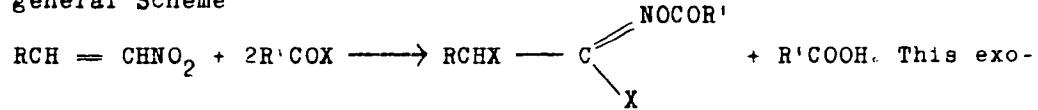
S/079/60/030/006/022/033/XX  
B001/B055

AUTHORS: Kozlov, L. M., Markovich Ye. A., and Liorber, B. G.

TITLE: On the Reaction of Nitro-olefins With Acyl Halides

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 6,  
pp. 1937 - 1941

TEXT: Basing on the publications Refs. 1-5, the authors investigated the reactions of  $\alpha$ -nitro-olefins with acyl halides. Unexpectedly, a nitroso-oxim rearrangement of the  $\alpha$ -nitro-olefins takes place in this reaction, leading to the acid halides of  $\alpha$ -halo-N-acyl hydroxamic acids and separation of the corresponding organic acids according to the general Scheme



thermic reaction occurs readily and gives good yields. It is accelerated by the acid catalysts  $\text{ZnCl}_2$ ,  $\text{ZnBr}_2$ , and  $\text{H}_2\text{SO}_4$ . The formation of

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On the Reaction of Nitro-olefins With  
Acyl Halides

S/079/60/030/006/022/033/XX  
B001/B055

nitroso compounds as intermediates is indicated by the blue-green color of the reaction mixture which disappears towards the end of the reaction. It is assumed that the first step is an addition in the 1,4-position. It is assumed that the first step is an addition in the 1,4-position of  $(\text{CH}_3)_2\text{C} = \text{CHNO}_2$  (Ref.3) and is followed by addition to the

$\text{C} = \text{N}$  bond and splitting off of the acid. The structure of the acid halides of the  $\alpha$ -halo-N-acyl hydroxamic acids was established by hydrolysis of the acid bromide of  $\alpha$ -bromo-N-propionyl hydroxamic acid, which gave hydroxylamine hydrobromide,  $\alpha$ -hydroxy-isobutyric acid, propionic acid, and hydrobromic acid. All the acid halides of the  $\alpha$ -bromo-N-acyl hydroxamic acids turn red on addition of a solution of iron chloride in aqueous alcoholic solution. Tertiary nitro-olefins reacted under similar conditions only with one molecule of acid halide, but the reaction products could not be obtained in analytical purity, since they evidently distill off together with the initial nitro-olefins. The constants and yields of the compounds synthesized are tabulated. There are 1 table and 8 references: 1 Soviet, 2 US, 3 British, 5 German, and 1 French.

Card 2/3

On the Reaction of Nitro-olefins With  
Acyl Halides

S/079/60/030/006/022/033/xx  
B001/B055

ASSOCIATION: Kazanskiy khimiko-tehnologicheskiy institut imeni  
S. M. Kirova (Kazan' Institute of Chemical Technology  
imeni S. M. Kirov)

SUBMITTED: February 23, 1959

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Card 3/3

ASSOCIATION NR:	AP-0001452	DATE 0079/63/033/005/1478/1485
AUTHOR:	Zelenov, I. N.; Kovalova, L. A.; Morkovkin, Yu. A.	
TYPE:	Nitroethers of ortho-silicic acid	
SOURCE:	Russian Chemical Review, V. 33, no. 3, 1963, 1478-1485	
TOPIC CODES:	nitroethers; ortho-silicic acid; alkyl chlorosilanes; silanes	
ABSTRACT: A method for making nitroethers or ortho-silicic acid involves reacting alkyl chlorosilanes with nitroalcohols at room or lower temperatures. Product nitroethers, obtained in a 50-60% yield are more stable to hydrolysis than corresponding unmodified compounds. They are heat stable to about 200°, high-boiling (100-150°) and non-volatile. 40 new silane compounds were synthesised and analysed. (Table 1, p. 1485).		
ASSOCIATION:	none	
INPUT DATE:	27Apr62	DATE ADD: 17Jun63
SUB. CODE:	00	NO. KEY SWS: 006
Cust. 1/1		

MARKOVICH, Ye.M.; FADDEYEVA, I.Z.

A new middle Jurassic fern from the Orsk brown coal basin.  
Paleont. zhur. no.3:127-130 '60. (MIRA 13:10)

1. Laboratoriya geologii uglya Akademii nauk SSSR.  
(Aktyubinsk Province--Gerns, Fossil)

VOLKOV, V.N.; MARKOVICH, Ye.M.; FADDEYEVA, I.Z.; VOLKOVA, I.B.

Short review of the history of the study of lower Mesozoic sediments  
in the southern Magnitogorsk synclinorium. Trudy Lab.geol.ugl.  
no.12:9-14 '61. (MIRA 14:8)  
(Ural Mountains—Coal geology)

KOLESNIKOV, Ch.M.; SPASSKAYA, I.S.; MARKOVICH, Ye.M.; FADDEYEVA, Z.I.

Paleontological characteristics of lower Mesozoic sediments in the southern Magnitogorsk synclinorium. Trudy Lab.geol.ugl. no.12:78-82 '61. (MIRA 14:8)

(Ural Mountains—Coal geology)

GORSKIY, I.I.; LEONENOK, N.I.; VOLKOV, V.N.; VOLKOVA, I.B.; MARKOVICH, Ye.M.

Evaluating coal potentials of the lower Mesozoic in the southern  
Magnitogorsk synclinorium. Trudy Lab.geol.ugl. no.12:169-175 :61.  
(Ural Mountains--Coal geology) (MIRA 14:8)

VOLKOVA, I. B.; NALIVKIN, D. V.; SLATVINSKAYA, Ye. A.; BOGOMAZOV, V. M.; GAVRILOVA, O. I.; GUREVICH, A. B.; MUDROV, A. M.; NIKOL'SKIY, V. M.; OSHURKOVA, M. V.; PETRENKO, A. A.; POGREBITSKIY, Ye. O.; RITENBERG, M. I.; BOCHKOVSKIY, F. A.; KIM, N. G.; LUSHCHIKHIN, G. M.; LYUBER, A. A.; MAKEDONTSOV, A. V.; SENDERZON, E. M.; SINITSYN, V. M.; SHORIN, V. P.; BELYANKIN, L. F.; VAL'TS, I. E.; VLASOV, V. M.; ISHINA, T. A.; KONIVETS, V. I.; MARKOVICH, Ye. M.; MOKRINSKIY, V. V.; PROSVIRYAKOVA, Z. P.; RADCHENKO, O. A.; SEMERIKOV, A. A.; FADDEYEVA, Z. I.; BUTOVA, Ye. P.; VERBITSKAYA, Z. I.; DZENS-LITOVSKAYA, O. A.; DUBAR', G. P.; IVANOV, N. V.; KARPOV, N. F.; KOLESNIKOV, Ch. M.; NEFED'YEV, L. P.; POPOV, G. G.; SHTEMPEL', B. M.; KIRYUMOV, V. V.; LAVROV, V. V.; SAL'NIKOV, B. A.; MONAKHOVA, L. P. [deceased]; MURATOV, M. V.; GORSKIY, I. I., glav. red.; GUSEV, A. I., red.; MOLCHANOV, I. I., red.; TYZHNOV, A. V., red.; SHABAROV, N. V., red.; YAVORSKIY, V. I., red.; REYKHERT, L. A., red. izd-va; ZAMARAYEVA, R. A., tekhn. red.

[Atlas of maps of coal deposits of the U.S.S.R.]Atlas kart ugle-nakopleriiia na territorii SSSR. Glav. red. I. I. Gorskiy. Zam. glav. red. V. V. Mokrinskii. Chleny red. kollegii: F. A. Bochkovskiy i dr. Moskva, Izd-vo Akad. nauk SSSR, 1962. 17 p.  
(MIRA 16:3)

1. Akademiya nauk SSSR. Laboratoriya geologii uglya. 2. Chlen-korrespondent Akademii nauk SSSR (for Muratov).  
(Coal geology—Maps)

MARKOVICH, Ye. N.

The "Malinovka" Collective Farm makes progress. Zemledelie 5 no.11:  
90-93 N '57. (MLRA 10:11)

1. Predsedatel' kolkhoza "Malinovka" Vsevolozhskogo rayona, Lenin-  
gradskoy oblasti.  
(Collective farms)

MARKOVICH, Yu. N.

S/137/60/000/006/004/015  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 6, p. 277,  
# 13676

AUTHORS: Gavrilov, P.D., Kurtangaleyev, R.M., Alentov, A.N., Markovich,  
Yu.N.

TITLE: The Effect of Iron <sup>1</sup> on Magnetic Properties of a Copper-Cobalt  
Alloy <sup>2</sup>

PERIODICAL: Tr. Kazansk. khim.-tekhnol. in-ta, 1957 (1959), No. 22, pp. 161-  
171 <sup>✓</sup>

TEXT: The authors studied the effect of Fe admixtures ( $\sim 2\%$ ) on the magnetic properties of a 50% Cu - 20% Ni 30% Co-alloy. Tests were made with cast, cast-annealed specimens ( $850^{\circ}\text{C}$ , 8 - 32 hrs) and specimens subjected to heat treatment to improve their magnetic properties (oil and water quenching at  $1,150^{\circ}\text{C}$ , tempering at  $650^{\circ}\text{C}$  for 3 and 6 hours); and rolled specimens. Best deformability was revealed in specimens annealed for 16 hours.  $B_r$  of 4100 gauss and  $H_c$  of 560 oersted were obtained after oil quenching and temper.

Card 1/2

S/137/60/000/006/00<sup>4</sup>/C15  
A006/A001

The Effect of Iron on Magnetic Properties of a Copper-Cobalt Alloy

ing for 6 hours. Magnetic characteristics of an alloy containing up to 2% Fe are by 20-40% below the maximum values attainable for this alloy without Fe. It is recommended to clean the crucible carefully, if a Fe-alloy was previously melted in it, and to use a quartz mixer instead of an iron one.

✓  
Ye.V.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

BEREZKIN, V.G.; PAKHOMOV, V.P.; ALISHOYEV, V.R.; STAROBINETS, L.L.; MARKOVICH,  
Z.P.; SEDOV, L.N.

Some new methods of studying polymeric compounds by gas chromatogra-

phy. Vysokom. soed. 7 no.1:185-187 Ja '65.

(MIRA 18:5)

MARKOVICHYUS, Sh.L. [Markovicius, S.], dotsent; SIDERAYTE, Sh.A.  
[Sideraitė, S.]

Clinical aspects of thyroiditis and strumitis. Klin. med. 41  
no.7:99-103 Jl'63 (MIRA 16:12)

1. Iz kafedry gospital'noy terapii (zav. L.Z.Lautsevichus)  
[Laucevicius, L.] Vil'nyusskogo gosudarstvennogo universiteta  
imeni V.Kapsukasa i l-y sovetskoy klinicheskoy bol'nitsy  
(glavnnyy vrach V.B.Bernatskis [Bernackis, V.], Vil'nyus.

~~ALL INFORMATION CONTAINED~~

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DATE 06/14/2000 BY SP/SP

1.4. (c) (1) (b) (2) (d) (1) (e) (1) (f) (1) (g) (1) (h) (1) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)

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APR 2000

MARCOVICI, M.; GOROMOSOVA, Eleonora; GAGIU, Teodora, assistante technique.

Contribution to the study of poliomyelitis eradication in the  
city of Bucharest. Arch. roum. path. exp. microbiol. 23 no.3:  
731-736 S'63

1. Travail de l'Institut "Dr. I. Cantacuzino"; Service des Enteroviroses, Bucarest.

MARKOVICS, M; KUVACS, E.

Investigation of potential change in production of citric acid in surface and deep cultures. p. 247

▲ MAGYAR TUDOMANYOS AKADEMIA V. OXZTALAY BOIOGLAI CSOPORTJANAK KOSIEMENEI.  
Budapest, Hungary. Vol. 3, no. 2, 1959

Monthly list of East European Accessions (EEAI). IC. Vol. 9, no. 1, Jan., 1960.

Uncl.

VAJDA, Gyorgy; MARKOVICS, Laszlo

Some problems relating to the quality of leather and shoes. Bor  
cipos 13 no. 3:69-73 My '63.

1. Bor- es Cipoipari Igazgatossag.

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Application. Corrosion. Corrosión Control H-4

Abs Jour : Ref Zhur - Khim., No 24, 1958, No 81938

Author : Markovic T.

Inst : -

Title : The Mechanism of Iron Corrosion in Soils.

Ori. Pub : Last. mater., 1958, 5, No 4, 147-151

Abstract : General review. Physical properties of various soils and their corrosion characteristics with respect to different metals are described. Various factors (humidity of ambient air), affecting the soil corrosion are reviewed.

Card : 1/1

3

SHOSHIN, A.A.; IGNAT'YEV, Ye.I.; MARKOVIN, A.P.; BYAKOV, V.P.

Present-day status of medical geography and the prospects for its development. Mat.Kom.med.geog.Geog.ob-va SSSR pt.1:14-22 '61.  
(MIRA 15:10)  
(MEDICAL GEOGRAPHY)

MARKOVIN, A.P.

General problems in medical geography; a short index of the literature in Russian. Mat.Kom.med.geog.Geog.ob-va SSSR pt.1:41-57 '61. 'VRA 15:10)

(BIBLIOGRAPHY--MEDICAL GEOGRAPHY)

BYAKOV, V.P.; MARKOVIN, A.P.; RACHKOV, I.M.; NOSHCHINSKIY, V.R.; IGNAT'YEV,  
Ye.I.

Informational reports. Mat.Kom.med.geog.Geog.ob-va SSSR pt.1:58-  
76 '61.  
(MIRA 15:10)  
(MEDICAL GEOGRAPHY)

SHOSHIN, A.A.; IGNAT'YEV, Ye.I.; MARKOVIN, A.P.; BYAKOV, V.P.

Nature, objectives and methods of medical geography. Geog. sbor.  
no.14:5-13 '61. (MIRA 15:1;  
(MEDICAL GEOGRAPHY)

MARKOVIN, A.P.

Historical study of the development of medical geography in Russia.  
Geog. sbor. no.14:14-28 '61. (MLA 15:1)  
(MEDICAL GEOGRAPHY)

MARKOVIN, G.I., inzh.

Effect of heat treatment on the structure and wearing capacity of  
cast iron used in pistons. Trudy MIIT no.118:33-44 '58.

(MIRA 12:2)

(Cast iron--Heat treatment) (Metallography)  
(Pistons--Testing)

MARKOVIN, G.I.

Studying the possibilities for increasing the life of the piston rings of an engine. Trudy MIIT no.110:119-124 '59.  
(MIRA 13:4)

(Piston rings) (Diesel locomotives)

MARKOVIN, G.I., inzh.

Effect of heat treatment on the thermal resistance of piston  
rings. Trudy MIIT no.122:123-131 '59. (MIRA 13:5)  
(Piston rings)

MARKOVIN, G. I., Cand Tech Sci (diss) - "Investigation of the possibility of increasing the service life of piston rings on locomotive engines". Moscow, 1960. 11 pp (Min Transportation USSR, Moscow Order of Lenin and Order of Labor Red Banner Inst of Railroad Transport Engineers im I. V. Stalin), 170 copies (KL, No 14, 1960, 132)

MARKOVIN, N.P.; KIRIYENKO, B.N.; AZHORIN, A., red.

[Performance of machine-tractor units at high speeds.  
Rabota mashinno-traktornykh agregatov na povyshennykh  
skorostях. Moskva, Kolos, 196.. 79 p.  
(MIRA 18:12)

1. MARKOVIN, V. I.
2. USSR (600)
4. Petroglyphs - Daghestan
7. Petroglyphs in Daghestan. Izv. Vses. geog. ob-vn 85 No. 2, 1953.
  
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

MARKOVINA, N.I.

Defense of disserations in the field of mathematics. Usp. mat. nauk  
18 no.4:229-232 Jl-Ag '63. (MIR 16:9)

MARKOVITCH, D.

Markovitch, D. Sur la limite inférieure des modules des zeros d'un polynôme. Acad. Serbe Sci. Publ. Inst. Math. 2, 236-242 (1948). (French. Serbian summary)

Let  $g(r) = \sum b_k r^k$ , with  $b_k > 0$  for all  $k$ , be convergent for  $|r| < R$ ,  $R$  sufficiently large. For any zero  $s = re^{i\theta}$  of a given polynomial  $f(s) = \sum a_k s^k$ , one has the inequality  $|a_k| \leq \sum |a_k| r^k$  which, if divided by the inequality  $g(r) = \sum b_k r^k = g_s(r)$  yields the inequality

$$|a_k| g(r)^{-1} \leq G = \left[ \sum |a_k/b_k| b_k r^k \right] / g_s(r) \leq M,$$

where  $M = \max |a_k/b_k|$  for  $k = 1, \dots, n$ , for  $G$  is a mean of the quantities  $|a_k/b_k|$  for  $k = 1, \dots, n$ . If now the  $b_k$  are so chosen that the equation  $g(r) = |a_k|/M$  has a single positive root  $r_*$ , this root will be a lower bound for moduli of the zeros of  $f(s)$ . The author illustrates this principle with some examples such as  $b_k = r^{k+1}/k! > 0$ , which leads to the result of Landau [Tôhoku Math. J. 5, 97-116 (1914)] that  $r_* = |a_n|^{1/n}/(|a_1| + M)$ , where  $M = \max (|a_k|)^{1/k}$  for  $k = 1, \dots, n$ .

Vol. 10 No. 7

Source: Mathematical Reviews,

S.M.J.

Markovitch, D.

Markovitch, D. Quelques remarques sur les progressions  
arithmétiques. Bull. Soc. Math. l'phys. Serbie 1, 17-21.  
(1949). (Serbian, Russian and French summaries)  
Suppose that in a sequence  $\{a_n\}$  we have  $\Delta^n a_n > 0$   
( $n=0, 1, \dots, K$ ).  $\Delta^{K+1} a_n = 0$  and put  $S_n = a_0 + \dots + a_n$ . It is  
shown that  $(n+1)/n < S_{n+1}/S_n < \binom{n+1}{K+1} + \binom{K+1}{n+1}$ .  
W. Feller (Ithaca, N.Y.).

Source: Mathematical Reviews, 1950 Vol. 11 No. 2

Markovitch, D.

Markovitch, D. Sur quelques formules approfondies pour la racine carrée d'un nombre. Bull. Soc. Math. Phys. Serbie 1, 71-76 (1949). (Serbian, Russian and French summaries)

Let  $x' = N$ . The author iterates the identity

$$x = (N + \lambda x)/(\lambda + x).$$

Substituting various values for  $\lambda$  (such as  $\lambda = [N!]$ ) he obtains a collection of approximations to  $x$ . W. Feller.

Markovitch, D.: On some approximate formulas for the square root of a number

Source: Mathematical Reviews, 1950 Vol 11 No. 2

Markovitch, D.

Markovitch, D. Extension d'un théorème de Hurwitz.

Bull. Soc. Math. Phys. Serbie 1, no. 3-4, 113-115 (1949).

(Serbian; French summary)

L'équation trinôme  $1+x^p+ax^n=0$  possède au moins un zéro dans le cercle  $|x+1| \leq 1$  si  $p$  désigne un entier positif impair ( $p < n$ ). *From the author's summary.*

MARKOVITCH, D.: Extension of a Theorem of Hurwitz

Source: Mathematical Reviews,

Vol. 12 No. 1

87m

MARKOVITCH, D.

X Markovitch, D. Sur quelques limites du module d'une somme. Bull. Soc. Math. Phys. Serbie 2, nos. 1-2, 31-35 (1950). (Serbo-Croatian. French summary)

If  $a_0, a_1, \dots, a_n$  are positive numbers,  $0 < \theta < \pi$ , and

$r = \max(a_{k+1}/a_k)$ , then

$$\sum a_k e^{ik\theta} \leq a_0 \max_{0 \leq k \leq n} [1 + r^{k+1}] / |1 - re^{i\theta}|.$$

This is proved very simply by writing the sum in the left member in the form  $\sum b_k e^{ik\theta}$ , where  $b_k = a_k/r^k$  and  $\theta = r \exp(i\theta)$ , and then applying the Abel partial summation formula and using the fact that the  $b_k$ 's are positive and monotone decreasing. In case the numbers  $a_k$  are complex, the same partial summation formula is applied directly to  $\sum a_k \exp(ik\theta)$  to show that it is dominated by the product of

$$|a_0 - a_1| + |a_1 - a_2| + \dots + |a_{n-1} - a_n| + |a_n|$$

and the greatest of the  $n+1$  numbers  $\sin((k+1)\theta)/\sin(\theta)$ ,  
 $k=0, 1, \dots, n$ . R. P. Agnew (Ithaca, N. Y.)

Source: Mathematical Reviews,

Vol. 12 No. 6

(SNW) *SP*

MARKOVICH, D.

Markovich, D. - La méthode de E. Galois et la résolution  
des équations algébriques. "Bull. Soc. Math. Phys.  
Serbie" 2, nos. 3-4, 73-80 (1950) (Serbo-Croation).  
French summary  
Expository paper

SM 10

Source: Mathematical Reviews,

Vol. 13 No. 7

Markovitch, D.

2  
3

Markovitch, D. Sur le théorème de Grace. Premier Congrès des Mathématiciens et Physiciens de la R.P.F.Y., 1949, Vol. II, Communications et Exposés Scientifiques, pp. 67-71. Naučna Knjiga, Belgrade, 1951. (Serbo-Croatian; French summary)

The author gives a new proof of the Theorem of Grace [Proc. Cambridge Philos. Soc. 11, 352-357 (1902)] and uses this to prove that for each fixed  $r$ ,  $r = 1, 2, \dots, n$ , every circle containing  $n$  and

$$p_k = a - r^{1/(k-1)} \left[ \frac{\gamma(k) P_k(a)}{(n-r) P_{k-1}^{(1)}(a)} \right]^{1/(k-1)}, \quad k = 1, 2, \dots, n,$$

contains at least one root of the  $n$ th-degree polynomial  $P_n(z)$ . When  $r=1$  this gives Laguerre's theorem.

J. H. Gammie (examination, 1955).

87000  
S7000

MARKOVITCH, Dragoljub.

Markovitch, Dragoljub. Sur un procédé de factorisation des polynômes. Bull. Soc. Math. Phys. Serbie 6, 3-11 (1954). (Serbo-Croatian summary)

Let  $a_n x^n + a_{n-1} x^{n-1} + \dots + a_1 x + a_0$  be a polynomial with real coefficients. A process is described for the factorization of this polynomial into two approximate factors, one of which is linear, and the conditions of convergence are determined. The computation of the coefficients by means of matrices is discussed.

E. Frank (Chicago, Ill.)

I - F/W

Revi'd

KELETI, Bela, dr.; FUZI, Miklos, dr.; ALFOLDY, Zoltan, dr.; KISZEL, Janos, dr.;  
MARKOVITS, Gyorgy, dr.

Explosive leptospirosis in the northern mountainous region,  
caused by swimming pool water. Orv. hetil. 97 no.37:1014-1018  
9 Sept 56.

1. A Magyar Nephadsereg Egészségügyi Szolgálatá es a Budapesti  
Orvostudományi Egyetem Mikrobiológiai Intézetének (igazgató:  
Alfoldy, Zoltan, dr. egyet. tanár.) közleménye.

(LEPTOSPIROSIS, epidemiol.

leptospiromeningitis, epidemic in Hungary in army camp  
caused by infected swimming pool water (Hun))

(MENINGITIS, etiol. & pathogen.

Leptospira, epidemic in Hungary in army camp caused by  
infected swimming pool water (Hun))

(ARMED FORCES PERSONNEL, dis.

leptospiromeningitis, epidemic in Hungary in army camp  
caused by infected swimming pool water (Hun))

MARKOVITS, L.

Current questions of model and product designing in the shoe industry. p. 102.

BŐR ES CIPOTECHNIKA. (Boripari Tudomanyos Egyesulet mint a Magyar Tudomanyos Egyesuletek Szovetsege Tagegyeslete) Budapest, Hungary. Vol. 9, no. 4, Auf. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11, November 1959.  
Uncl.

KERESZTENY, Bela; MARKOVITS, Laszlo

Correlation between the decrease of the effect of ammonium nitrate and some soil research data. Agrokem talajtan 12 no.1:31-40 Mr '63.

1. Agrartudomanyi Foiskola Kemia-Talajtani Tanszeke, Mosonmagyarovar.

HUNGARY / Virology. Human and Animal Viruses.

E-3

Abs Jour: Ref Zhur-Biol., No 10, 1958, 43064.

Author : Markovits, P., Biro, J.

Inst : Not given.

Title : Experimental Reproduction of Hog Cholera Viruses  
in Tissue Cultures. II. Comparative Studies of  
Virus Strains "Filaksiya" (Phylaxia) and "Washing-  
ton."

Orig Pub: Magyar allatorv. lapja, 1956, 11, No 1012, 357-360.

Abstract: In the cultivation of "Phylaxia" strain in cultures  
of hog embryo tissues (of skin, lings, and spleen),  
the infection titer up to the 15th passage attained  
 $10^{-4}$  to  $10^{-6}$ , but diminished subsequently and after  
the 30th passage infectiousness disappeared. Dif-  
ferent media and different periods of cultivation  
(3, 6, 24, and 72 hours) did not restore infectious-

Card 1/2

4

HUNGARY / Virology. Human and Animal Viruses.  
Swine Disease Viruses.

E-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 90585

Authors : Markovits, P.; Biro, J.

Inst : Hungarian AS

Title : Experimental Studies on the Propagation of Swine-Fever Virus  
in Tissue Culture. II. Comparative Studies of the Virus  
Strains "Phylaxia" and "Washington".

Orig Pub : Acta veterin. Acad. sci. hung., 1957, 7, No. 3, 283-287.

Abstract : The strains "Phylaxia" (Hungary) and "Washington" (USA) were  
cultivated in the hog embryo tissues (skin, lungs, spleen).  
In the first 15 applications, the strain "Phylaxia" had a  
titer of  $10^{-3}$  -  $10^{-6}$ . Then, the titer fell off and after  
30 passages the virus was not detected. The use of differ-  
ent tissues from different nutritional habitats was not re-  
flected on the adaptability of the virus. The infectiosity

Card 1/2

HUNGARY/Virology. Human and Animal Viruses. Viral Agents of Diseases E  
In Swine

Abs Jour : Ref Zhur - Biol., No 4, 1959, No 14666

Author : Markovits Pal; Biro, Jeno

Inst : -

Title : The Multiplication of the Swine Plague Virus in Tissue  
Culture. III. A Study of the Virulence of the Swine Plague Virus  
Grown in Tissue Culture.

Orig Pub : Magyar allatorv. lapja, 1957, 12, No 11, 347-350

Abstract : The virulence of the strain "Phylaxia" decreased following  
25-64 passages in a tissue culture (TC). It decreased  
markedly following 66-133 passages while immunogenicity was  
preserved at the same time: 98 percent of animals immunized  
with this virus survived following an effective infection  
with a virulent strain. A simultaneous injection of the at-  
tenuated virus and of a specific antiserum considerably

Card : 1/3

HUNGARY/Virology. Human and Animal Viruses. Viral Agents of Diseases E  
in Swine.

Abs Jour : Ref Zhur - Biol., No 4, 1959, No 14666

weakened the reaction which took place following infection with the virus only. Following this immunity did not decrease in the animals. The possibility of contact infection of the animals with the attenuated virus was demonstrated, under which conditions the reaction and the following immunity in the infected animals were identical to those observed in the experimentaly infected ones. The virulence of the attenuuted strain did not increase following passage to the organism of the swine. The "Washington" strain also underwent a change in the process of passage in the TC but to a significantly lower degree than "Phyaxia." It produced a lethal disease in 74 percent of the infected animals following 137 passages. It is easy to grow the "Washington" strain while in order to maintain the "Phylaxia" strain in

Card : 2/3

- 21 -

HUNGARY/Virology. Human and Animal Viruses. Viral Agents of Diseases E  
In Swine.

Abs Jour : Ref Zhur - Biol., No 4, 1959, No 14666

T C periodical passages through the organism of the swine  
are necessary. The "Yen-Sel" strain behaved in the T C  
like "Phylaxia". L.S. Segal'.

Card : 3/3

1. Introduction

Recently, we have seen "missed" data which is of interest in regard to the possible "missed" virus which may have been developed during the initial verification work on the Soviet Sputnik.

Propagation of Newcastle Disease Virus in Calf Lung Tissue  
I.e. Adaptation of Avian Virulent Newcastle Disease  
to Calf and the Kickeney Passaged Cultures.

Proceedings, Royal Veterinary College, London, Vol. 10, No. 5, 1961, p. 287-291.

Abstract [English article; authors' translation]: The avian virulent Newcastle disease (d) strain was adapted to calf lung tissue culture. This was attempted on the Kickeney cultures, as well as to calf and Kickeney tissue cultures. In all three cultures, the virus was adapted. Effectively, the titre of the virus was increased. The infectivity of the virus was 10<sup>-2.0</sup> and 10<sup>-2.5</sup>, respectively in the calf cultures. In view of how the antigenicity of the tissue culture viruses did not differ, the titres of the virus produced in embryonated hen eggs, i.e., that is to say, differences are negligible, the other differences, or twenty differences are negligible, the other differences,

etc.

12

MARKOVITS, Pal, dr.; KOJNOK, Janos, dr.

Recent tissue culture and its role in producing vaccines against virus  
diseases. Magy állatorv lap 17:6-9 S '62.

1. Phylaxia Allami Oltoanyagtermelő Intézet, Budapest.

MARKOVITS, Pal, dr.; TOTH, Bela, dr., az allatorvostudomanyok kandidatusa

Propagation of some of the vaccine strains of the fowl pest virus  
in the mammalian tissue cultures. Magy allatorv lap 17:12-15 S '62.

1. Phylaxia Allami Oltoanyagtermelő Intézet, Budapest.

MARKOVITS, Pal, dr.

Do viruses take part in causing tumors? Elet tud 17 no.4:118-122  
Ja '62.

MARKOVITS, P.; TOTH, B.

Propagation of Newcastle disease virus in tissue cultures.  
Pt.2. Acta veter Hung 12 no.3:287-293 '62.

1. Phylaxia State Serum Institute (Director: J. Molnar), Budapest.

MARKOVITS, Pal, dr.

The S.E. polyome-virus. Magy allatorv lap 17 no.3:306-308 Ag '62.

l. Phylaxia Allami Oltoanyagtermelo Intezet. Igazgato: Molnar Jozsef  
dr.

MARKOVITS, P.; TOTH, B.

The propagation of Newcastle disease virus (NDV) in tissue cultures.  
Pt. 3. Acta veter Hung 14 no.1:63-70 '64.

1. Phylaxia State Serum Institute (Director: J.Molnar), Budapest.

OTH, Bela, dr., as titkosszolgálmányok rendszertiszt; MARKOVITI, Bel, Mr.

Comparing chicken cholera virus strains or the dates of  
their smallest immunizing dose. May 1964 (Ap. 19)  
no.242-46 F '64.

1. The USSR Academy of Medical Sciences, Director  
Dr. Leopold Marder, Budapest.

BAMBERGER, K.; MARKOVITS, F.

Studies on tissue-culture-propagated turkey-pox virus. Acta  
veterin. acad. sci. Hung. 15 no.2:161-165 '65

1. Veterinary Medical Research Institute (Director: J. Manna) of the Hungarian Academy of Sciences, Budapest, and Phylaxia State Vaccine Institute (Director: J. Molnar), Budapest.

MARKOVITS, P.; TOTH, B.

Virus-neutralizing antibody response of ducks to immunization  
with virulent or attenuated hepatitis virus. Acta veterin.  
acad. sci. Hung. 15 no.2:205-212 '65

1. Phylaxis State Serum Institute (Director: J. Molnar),  
Budapest.

HUNGARY

TOTH, Bela, Dr., Candidate of Veterinary Sciences, CZOVEK, Laszlo, Dr., and MARKOVITS, Pal, Dr., Phylaxia State Works for Immunizing Material Production (Phylaxia Allami Oltoanyagtermelo Intezet) [location not given] (Director: MOLNAR, Jozsef, Dr.).

"The Role of the Immunization of Breeding Stock with Attenuated-Virulence Virus in the Control of Infectious Hepatitis in Ducks"

Budapest, Magyar Allatorvosok Lapja, Vol 21, No 5, May 1966, pp 208-210.

Abstract: Tests with attenuated TN virus for infectious hepatitis, administered to duck breeding stock by injection or orally, showed that it is possible to confer natural immunity for several generations. Immunization demonstrably increased the amount of specific antibodies in the blood serum. 5 references, including 3 Hungarian and 2 Western.

1/1

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Part VIII 1, Valerian Tschitscherin; 1900-1920, May 1920

1920-1921, May 1920, May 1921, May 1921, May 1921  
1921-1922, May 1921, May 1922, May 1922, May 1922

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MARKOVNIKOV, V. L., Engineer

"Investigation of the Starting Process of a Trolley Bus Power Drive."  
Sub 3 Jul 47, Moscow Automobile Highway Inst imeni V. M. Molotov

Dissertations presented for degrees in science and engineering in  
Moscow in 1947 (Contd Tech Sci)

SO: Sum.No. 457, 18 Apr 55

MARKOVNIKOV, V. L.

Avtomobil nye peredachi na elektricheskem transporte. Automobile transmission devices in electric transportation. Moskva, Gos. nauch.-tekhn. izd-vo mashinostroit. lit-ry, 1949, 201 p. diagrs.  
Bibliography: p. 199-200.

DLC: TL260.M36

Tekhnicheskoe obsluzhivanie trolleybusov. Technical maintenance of trolleybuses. Moskva, izd-vo Narkomkhoza RSFSR, 1944. 75 p. diagrs.

DLC: TL232.M3

So: Soviet Transportation and Communications. A Bibliography. Library of Congress Reference Department, Washington, 1952, Unclassified

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MARSHFIELD, N. I.

The above personnel report was made on [redacted] (date) [redacted] (new streetcar). [Redacted, date] (date) [redacted] (new streetcar).

Mr. [redacted] (name) [redacted] (name), [redacted], [redacted], [redacted]

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032520003-5"

YEFREMOK, I.S.; MARKOVNIKOV, V.L.; PAL'KEVICH, B.S., professor, doktor tekhnicheskikh nauk, retsentrant; TRAKHTMAN, L.M., kandidat tekhnicheskikh nauk, dotsent; KLEBNIKOV, V.M., inzhener, redaktor.

[Trolley buses; design and calculation] Trolleibusy; konstruktsiya i raschet. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.i sudostroit. lit-ry, 1954. 379 p.  
(Trolley buses)

(MLRA 7:6)

*MARKOYNIKOV V.L.*

YEFREMOV, I.S.; MARKOVNIKOV, V.L., kandidat tekhnicheskikh nauk, retsent; KLENNIKOV, V.M., inzhener, nauchnyy redaktor; TRAKHTMAN, L.M., kandidat tekhnicheskikh nauk, nauchnyy redaktor; IOFFE, M.L., redaktor izdatel'stva; GUROVA, O.A., tekhnicheskiy redaktor.

[Trolley buses: principles of theory, design and calculations]  
Trolleybusy: osnovy teorii, konstruktsii i rascheta. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1954. 479 p.  
(Trolley buses) (MIRA 7:11)

MARKOVNIKOV, V.

ZHITS, M., kandidat tekhnicheskikh nauk; MARKOVNIKOV, V., kandidat  
tekhnicheskikh nauk.

Increasing the length of service of trolley-bus transmission  
gears. Zhil.-kom.khos. 4 no.3:13-17 '54. (MLRA 7:6)  
(Trolley buses—Transmission devices)